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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/138,054	08/21/1998	RAMANATHAN RAMANATHAN	INTL-0084-US	3628

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EXAMINER
VU, NGOC K

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/138,054	RAMANATHAN, RAMANATHAN
	Examiner	Art Unit
	Ngoc K. Vu	2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>12 November 2004</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,13,14,21,27,39-41,44,45,50,51 and 53</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) <u>14,21,27,46,50,51 and 53</u> is/are allowed.
6) ☒ Claim(s) <u>1,13,39-41,44 and 45</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1.   Amendments filed 11/12/2004, with respect to claims 1, 13, 14, 21, 27, 39-41, 44, 45,

50, 51 and 53 have been fully considered. Upon the updated search, the final rejection mailed

7/15/2004 has been withdrawn. However, upon further consideration, a new ground(s) of

rejection is made in view of Zhang of the record and a newly discovered Bailey reference.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

3.   Claims 39, 40, 41, 44 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated

by Zhang (US 6,181,711 B1).

        Regarding **claim 39**, Zhang discloses a transmission system *(250, 200, 300, 900 – see*

figures 2A, 2C, 3 and 9) comprising:

        a data management module *(e.g., bit conversion unit 202, 304, 904 – see figures 2A,*

2C, 3 and 9) capable of managing data flow *(e.g., adjusting bit rate for data transmission - see*

col. 6, lines 39-41; col. 8, lines 42-47; col. 15, lines 57-60); and

        a transmitter module *(e.g., 204, 206, 306, 906 – see figures 2A, 2C, 3 and 9)* coupled to

a transport medium *(18 – see figures 2C, 3 and 9)* and to the data management module (see

figures 2C, 3 and 9), the transmitter module to contain configuration information specifying at

least one predefined transmission characteristic *(e.g., the transmitter, e.g., 906, provides rate*

value to the conversion device, e.g., 904. That is, the transmitter contains configuration

information, e.g., rate value, at least one predefined specifying transmission characteristic, e.g.,

ADSL or ATM transmission characteristic − see col. 10, lines 42-49; col. 15, line 60 to col. 16,

line 12),

the data management module to access the configuration information to determine the

at least one predefined transmission characteristic and to modify data flow management based

on the at least one predefined transmission characteristic (*for example, the conversion unit*

determines the capacity of RADSL/ADSL channel and adjusts the bit rate based on the rate

value provided from the transmitter. RADSL transmitter adapts the maximum channel capacity

to the physical medium 18 condition by adjusting the coding configuration − see abstract; col. 8,

lines 25-27; col. 10, lines 31-57; col. 11, lines 60-65; col. 15-16, lines 33-26; col. 16, lines 47-

49), wherein the configuration information is retrieved by the data management module at

startup of the transmitter module *(it is noted that the initialization and training process*

determines the proper coding configuration best matched to the current channel condition in

order to achieve the maximum channel capacity. Particularly, the transmitter, e.g., 906, is

modified by providing an output for passing along rate control signals received at initialization or

during operation. The transmitter is coupled to receive bit rate change control signals at either

initialization or on-line mode. The control signal is in the form of bit rate value that the

transmitter can handle. This value is passed on to the conversion unit 904 via line 912 to

determine the targeted bit rate − see col. 7, lines 59-62; col. 15, line 53 to col. 16, line 49).

Regarding **claim 40**, Zhang discloses that the transmission characteristic of the

transmitter module varies over time *(using bit rate conversion to match the rate of the bit stream*

to the capacity of the channel. It is noted that bit rate may not be constant, but variable under

certain constraints. Zhang further discloses that the initialization & reconfiguration logic in box

908 may be a suite of signaling protocols exchanged between the receiver 208 and the

transmitter 906 so that each device knows what is the maximum achieved bit rates in each

directions. In ANSI implementation, on-line adaptation and reconfiguration of bit rate are

signaled via the ADSL overhead control channel and the channel capacity can be increased in

minimum steps of 4 kbps at an interval of 17ms to about 43 sec selectable by the RADSL

receiver 208. This provides sufficient flexibility to the rate conversion device to properly setup

the rate control parameters to perform the rate conversion – see col. 8-9, lines 57-21; col. 16,

lines 38-46; col. 16-17, lines 66-6).

Regarding **claim 41**, Zhang discloses an interface between the data management

module and the first transmitter module *(for example, the output of the bit rate conversion*

device 304 is in turn coupled to the input of the transmitter 306 by line 308; the communication

between transmitter 906 and the conversion device via lines 910 and/or 912 – see col. 8, lines

50-52 and figure 9. Thus, there must be an interface between the conversion device and the

transmitter to allow these devices to transmit and receive the data appropriately).

Regarding **claim 44**, Zhang discloses that transmission system may be any one of a

number of conventional transmission systems, including but not limited to ASDL, ATM, ISDN

links, wireless/terrestrial networks, digital satellites, and digital cable networks, etc. (see col. 8,

lines 35-36).

Regarding **claim 45**, Zhang discloses that the channel capacity supported by the

channel, e.g., ADSL channel, is advantageously conveyed to the conversion device 904 during

the initialization stage.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang

et al. (US 6,181,711 B1) in view of Bailey et al. (US 5,497,460 A).

Regarding **claim 1**, Zhang discloses a transmission system *(250, 200, 300, 900 – see*

figures 2A, 2C, 3 and 9), comprising:

a data management module *(e.g., bit conversion unit 202, 304, 904 – see figures 2A,*

2C, 3 and 9) capable of managing data flow *(e.g., adjusting bit rate for data transmission - see*

col. 6, lines 39-41; col. 8, lines 42-47; col. 15, lines 57-60);

a transmitter module *(e.g., 204, 206, 306, 906 – see figures 2A, 2C, 3 and 9)* coupled to

a transport medium *(18 – see figures 2C, 3 and 9)* and to the data management module (see

figures *2C, 3 and 9),* the transmitter module to contain configuration information specifying at

least one predefined transmission characteristic *(e.g., the transmitter, e.g., 906, provides rate*

value to the conversion device, e.g., 904. That is, the transmitter contains configuration

information, e.g., rate value, at least one predefined specifying transmission characteristic, e.g.,

ADSL or ATM transmission characteristic – see col. 10, lines 42-49; col. 15, line 60 to col. 16,

line 12);

the data management module to access the configuration information to determine the

at least one predefined transmission characteristic and to modify data flow management based

on the at least one predefined transmission characteristic *(for example, the conversion unit*

determines the capacity of RADSL/ADSL channel and adjusts the bit rate based on the rate value provided from the transmitter. RADSL transmitter adapts the maximum channel capacity to the physical medium 18 condition by adjusting the coding configuration – see abstract; col. 8, lines 25-27; col. 10, lines 31-57; col. 11, lines 60-65; col. 15-16, lines 33-26; col. 16, lines 47-49), and the configuration information is retrieved by the data management module at startup of the transmitter module (it is noted that the initialization and training process determines the proper coding configuration best matched to the current channel condition in order to achieve the maximum channel capacity. Particularly, the transmitter, e.g., 906, is modified by providing an output for passing along rate control signals received at initialization or during operation. The transmitter is coupled to receive bit rate change control signals at either initialization or on-line mode. The control signal is in the form of bit rate value that the transmitter can handle. This value is passed on to the conversion unit 904 via line 912 to determine the targeted bit rate. - see col. 7, lines 59-62; col. 15, line 53 to col. 16, line 49).

Zhang does not disclose an additional transmitter module and wherein each transmitter module is associated with a different transport medium.

However, Bailey discloses a transmission system comprises a plurality of transmitter modules, e.g., 28b-e, wherein each of the transmitter modules is associated with a different transport medium, for example, STP for module 28b, UTP for module 28c, coax for module 28d and AUI for module 28e as illustrated in figure 2 (see figure 2 and col. 3, lines 18-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Zhang by including a plurality of transmitter modules and each of the transmitter modules is associated with a different transport medium as disclosed by Bailey in order to efficiently support various available physical media over which the network data may be transmitted.

Regarding **claim 13**, Zhang discloses that the channel capacity supported by the

channel, e.g., ADSL channel, is advantageously conveyed to the conversion device 904 during

the initialization stage.

Allowable Subject Matter

6.   Claims 14, 21, 27, 46, 50, 51 and 53 are allowed.

7.   The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art, Zhang of the record teaches a system and method for converting a

bit stream of a given bit rate to a different bit rate for reliable transport over communication

channels. Zhang fails to teach or fairly suggest the feature "the configuration information

comprises at least one of information to indicate if the first transmitter module is able to assign

priorities to data, and information to indicate if the first transmitter module is able to perform

bandwidth management".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Ngoc K. Vu whose telephone number is 703-306-5976. The examiner can

normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Christopher Grant can be reached on 703-305-4755. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ngoc K. Vu
Examiner
Art Unit 2611

January 15, 2005